

A Comprehensive Investigation of Agricultural Trade in India

Anita Meena
Assistant Professor
Department of Economics
University of Rajasthan, Jaipur

Abstract

Agriculture sector is mainstay for the Indian economy with approximately 17% of the share of GVA. It is a prominent sector for the Indian economy as it is the primary livelihood source for 54.6 % of India's population and generates employment for 45% of the workforce. Indian agricultural exports have increased manifolds over the years. Indian agricultural commodities occupy a supreme position in the global market. The present study analyzes growth rates and trend of agricultural trade of selected commodities in India during 1990-91 to 2016-17. It also examines performance of India's agricultural exports and explores export potential of India's agricultural commodities.

Keywords: GVA, Agricultural trade, Growth rates, Agricultural Exports

Introduction

The agriculture sector of India is experiencing structural changes over the years. The percentage share of agriculture in country's GDP has been continuously declining after 1950s, but the importance of the sector cannot be denied. Since it fosters equitable growth, increase rural income and maintain food security, it plays a critical role in India's socioeconomic development. Over the last few decades, India's agriculture sector has grown at a rapid pace. A change from traditional farming to high-value crops, horticulture, and animal (poultry, dairy, and fisheries) production is also taking place in this sector.

India has made enormous strides towards food security in the years since its independence. The population of India has more than tripled, while food grain production has more than quadrupled. There has been a significant increase in the amount of food grain accessible per

capita. Prior to the mid-1960s, India had to rely on imports and food aid to meet its internal needs. Two years of severe famine in 1965 and 1966, however, led India to overhaul its agricultural strategy and recognize that it could no longer rely on foreign help and imports for food security. India implemented important policy reforms aimed at achieving food grain self-sufficiency, which led to the green revolution, which transformed the agricultural sector. India was able to meet the needs of its population while also profitably exporting various agricultural items to other countries across the world.

India's agriculture sector is experiencing certain growth hurdles such as food staples production in India is heavily dependent on the monsoon. Farm yields are typically lower than the global average. Heavy government regulation, inefficiency in the food distribution system, poor infrastructure (which results in post-harvest losses of up to 40% for certain products), lack of availability and awareness of modern agricultural practices and technologies, unpredictable weather, small average farm sizes, and domestic agriculture support programs and subsidies are the factors that contribute to low productivity of the sector.

In a few crops, such as rice, cotton, sugarcane, cashew nut, castor seed, and peanut, India has emerged as a key Agri-exporter. According to the World Trade Organization's Trade Statistics, India's agricultural exports and imports accounted for 2.27 percent and 1.90 percent of global farm trade, respectively, in 2017.

II Literature Review

Burange, L., and Chaddha, S. (2008) attempted to examine the structure of comparative advantage in India and the changes in the scene from 1996 to 2005. The study also attempted to assess India's RCA in exports and imports of several types of products classified according to their manufacturing. The RCA index was calculated using the Balassa measure in this study. According to the study's findings, India has a competitive advantage in the export of labor-intensive commodities like textiles as well as scale-intensive items like chemicals and iron and steel. In the exports of Ricardo and HO items, India has a comparative advantage. In the RCA world, PC items have not shown much improvement. In terms of imports, India's comparative advantage is primarily in Ricardo goods. As evidenced by the lack of RCA in HO imports, all

production of items needing standard technology is going to developing nations like India. According to the report, if India is to shift to a higher trajectory of cutting-edge technology and, more significantly, give a competitive advantage in such goods in comparison to the rest of the world, more accumulation of physical and human capital is required. For four crops, rice, maize, chickpea, and rapeseed mustard, Chand R. (1999) calculated the impact of globalization on producer surplus, consumer surplus, and net social welfare. According to the findings, trade liberalization will raise domestic wholesale and farm level prices of rice and maize while decreasing prices of edible oils and oilseeds such as rapeseed mustard. The impact on rice prices would be minimal, but it would be significant on maize prices. The free import of rapeseed mustard oil would make it significantly less expensive. Despite the fact that rice is export competitive, free trade would result in a little net social cost for the country. Trade liberalization has shown to be extremely advantageous to the country in the instance of maize. The loss of producer surplus from free rapeseed mustard imports is substantially smaller than the corresponding gain to consumers. The study suggested that by lowering domestic marketing costs and tapping appropriate markets for imports, the benefits of trade liberalization might be increased. Rajkumar and Dadhich V. (2013) looked at how India's agricultural exports grew and performed over time (1991-2010). The study also looked at how the proportion of various commodity groups to the total agricultural export basket has changed over time. According to the study's findings, India has been able to sustain its growth rate in exports of certain commodities such as rice and cereals, but several other commodities such as tea, coffee, pulses, sugar, and others have been badly affected. Agricultural commodities' exports have been extremely volatile over the study period. India used to be the world's biggest exporter of several commodities, but it fell out of favour over the study period. Although the share of Indian farm export in overall export climbed from 1991 to 2011, growth was slower than predicted when compared to non-agricultural export. According to the study, the Indian government would need to take some practical initiatives in the future to improve agriculture exports. Ramphul (2006) examined the impact of AOA on India's agricultural trade balance. The study also pinpointed the origins of India's agricultural export growth. The trajectory and pattern of India's agricultural trade in the pre-WTO and post-WTO periods were studied using an exponential growth model and a nominal growth model. The study discovered that India's agricultural

exports and imports have had lower average annual growth rates, with agricultural exports faring the poorest. The AOA failed to promote India's net farm trade to expand. The reduction in agricultural growth caused a drop in India's agricultural export growth rate. Another cause could be the large quantity of domestic subsidies granted to farmers by affluent countries. It was argued that India should keep its agricultural tariff rates at the WTO final bound level in order to protect the country's agricultural productivity. Using time series data from 1980-81 to 2010-11, Sahni P. (2014) examined trends in India's exports. The study revealed that India's export performance has improved dramatically in the post-reform period, with a discernible improvement in the value, composition, and direction of the country's exports. Despite the fact that the volume and value of exports have expanded dramatically, India's share of global exports continues to fall short of expectations. The proportion of high-value and differential products, as well as petroleum products, has increased in India's export basket, indicating that the Indian economy is diversifying and non-traditional export commodities are gaining prominence. The increased share of developing countries, OPEC, Latin America, Africa, and Asia in India's exports has been the most notable transformation in the post-reform era. According to the study, India's export pattern needs to be reoriented to include more skill-intensive and knowledge-intensive goods and services of competitive international quality.

III Methodology

The research is conducted over a 28-year period, from 1990-91 to 2016-17. The time period has been separated into two sub-periods 1990-91 to 1999-2000, and 2000-01 to 2016-17. Annual reports, Ministry of Agriculture and Farmers Welfare; Agricultural Statistics at a Glance 2018 and Handbook of Statistics on Indian Economy have been used to compile secondary data.

IV Results and Discussion

Trend and Pattern of India's Agricultural Trade

India is one of the world's largest producers of agricultural products. India has transformed itself from a net importer of food grains in the 1950s to a considerable exporter of agricultural commodities. According to the World Trade Organization's Trade Statistics, India's proportion in global agricultural exports and imports in 2016 was 2.1 percent and 1.8 percent respectively.

In specialist agricultural products such as basmati rice, guar gum, and castor, India has achieved export competitiveness. Agricultural trade as a percentage of agriculture's Gross Value Added (GVA) has been around 15% for the past few years, with an increase in 2016-17.

Table 1: India's Top 10 Agricultural Export Commodities**(Value in Rs. Crores)**

S.No.	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17
1	Rice-basmati	19409	29292	27599	22719	21604
2	Spices	15177	15146	14842	16630	19442
3	Rice (other than basmati)	14449	17795	20336	15483	17145
4	Cotton raw	20277	22338	11643	12821	10982
5	Sugar	8576	7179	5327	9825	8678
6	Fresh vegetables	3407	5384	4612	5237	5772
7	Coffee	4711	4799	4973	5125	5668
8	Groundnut	4065	3187	4675	4075	5454
9	Oil meals	16519	17070	8128	3599	5371
10	Cashewnut	4067	5095	5566	5028	5303
	Total agri & allied Exports	227193	262779	239471	215396	227554

Source: Department of Commerce

Table 1 lists the top ten agricultural commodities exported by India between 2012-13 and 2016-17. Agricultural exports increased by almost 0.15 percent from Rs.2,27,193 crores in 2012-13 to Rs. 2,27,554 crores in fiscal year 2016-17. Higher exports of rice basmati, spices, rice (non-basmati), raw cotton, sugar etc. drove up the value of agricultural exports in 2016-17. Agriculture's share of overall exports in India fell from 13.90 percent in 2012-13 to 12.27 percent in 2016-17.

Table 2: India's Top 10 Agricultural Import Commodities**(Value in Rs. Crores)**

S.No.	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17
1	Vegetable oils	53562	44038	64894	68677	73047
2	Pulses	13345	11037	17063	25619	28523
3	Fresh fruits	6180	7716	9544	11072	11241
4	Cashew nut	5434	4668	6600	8701	9027
5	Spices	2716	3452	4392	5400	5758
6	Sugar	3094	2287	3668	4038	6868
7	Cotton raw	2467	2376	3101	2566	6337
8	Misc processed items	1268	1474	1749	1811	2116
9	Cocoa products	1049	1072	1551	1399	1540
10	Oil Meals	210	200	273	430	975
	India's total agri and allied imports	95719	85727	121238	140311	164680

Source: Department of Commerce

Table 2 displays the top ten agricultural goods imported by India between 2012-13 and 2016-17. India's agricultural imports surged by approximately 72 percent from Rs 95,719 crores in 2012-13 to Rs 1,64,680 crores in 2016-17. Higher imports of vegetable oils, pulses, fresh fruits, cashew nuts, spices, sugar drove up the value of agricultural imports during this time period. Agricultural imports grew their share of overall imports from 3.59 percent in 2012-13 to 6.42 percent in 2016-17.

**Table 3: Share of Exports of Principal Agricultural Commodities to Total Exports
(Value in Rs. Crores)**

Year	Agricultural Exports	Total National Exports	%Share of Agricultural Exports to Total National Exports
1990-91	6012.76	32527.28	18.49
1991-92	7838.04	44041.81	17.80
1992-93	9040.30	53688.26	16.84
1993-94	12586.55	69748.85	18.05
1994-95	13222.76	82673.40	15.99
1995-96	20397.74	106353.35	19.18
1996-97	24161.29	118817.32	20.33
1997-98	24832.45	130100.64	19.09
1998-99	25510.64	139751.77	18.25
1999-00	25313.66	159095.20	15.91
2000-01	28657.37	201356.45	14.23
2001-02	29728.61	209017.97	14.22
2002-03	34653.94	255137.28	13.58
2003-04	36415.48	293366.75	12.41
2004-05	41602.65	375339.53	11.08
2005-06	45710.97	456417.86	10.02
2006-07	57767.87	571779.28	10.10
2007-08	74673.48	655863.52	11.39
2008-09	81064.52	840755.06	9.64
2009-10	84443.95	845533.64	9.99

2010-11	113046.58	1136964.22	9.94
2011-12	182801.00	1465959.31	12.47
2012-13	227192.61	1634318.29	13.90
2013-14	262778.54	1905011.00	13.79
2014-15	239681.04	1896348.42	12.64
2015-16	215396.32	1716384.40	12.55
2016-17	226651.91	1849433.55	12.26

Source: Agricultural Statistics at a glance 2018, Ministry of Agriculture & Farmers Welfare

From 1990-91 to 2016-17, Table 3 displays the percentage of agriculture exports in total exports. Agriculture exports accounted for 18.49% of overall exports in 1990-91. In 1999-2000, it dropped to

15.91 percent. Agriculture exports climbed somewhat in the years 1993-94, 1995-96, and 1996-97 compared to the previous year, but dropped in the other years. In the next decade, farm exports accounted for 14.23% of overall exports in 2000-01. In the 2016-17 fiscal year, it fell to 12.26%. In comparison to the previous year, the share of farm exports increased somewhat in the years 2006-07, 2007-08, 2009-10, 2011-12, and 2012-13. In 1996-97, the highest share was 20.33 percent, while the lowest was 9.64 percent in 2008-09.

Table 4: Share of Imports of Principal Agricultural Commodities to Total Imports**(Value in Rs. Crores)**

Year	Agricultural Imports	Total National Imports	%Share of Agricultural Imports to Total National Imports
1990-91	1205.86	43170.82	2.79
1991-92	1478.27	47850.84	3.09
1992-93	2876.25	63374.52	4.54
1993-94	2327.33	73101.01	3.18
1994-95	5937.21	89970.70	6.60
1995-96	5890.10	122678.14	4.80
1996-97	6612.60	138919.88	4.76
1997-98	8784.19	154176.29	5.70
1998-99	14566.48	178331.69	8.17
1999-00	16066.73	215528.53	7.45
2000-01	12086.23	228306.64	5.29
2001-02	16256.61	245199.72	6.63
2002-03	17608.83	297205.87	5.92
2003-04	21972.68	359107.66	6.12
2004-05	22811.84	501064.54	4.55
2005-06	15977.75	660408.90	2.42
2006-07	23000.28	840506.31	2.74
2007-08	22549.81	1012311.70	2.23
2008-09	28719.24	1374435.55	2.09

2009-10	54365.29	1363735.55	3.99
2010-11	51073.97	1683466.96	3.03
2011-12	70164.51	2345463.24	2.99
2012-13	95718.89	2669161.96	3.59
2013-14	85727.30	2715433.91	3.16
2014-15	121319.02	2737086.58	4.43
2015-16	140289.22	2490305.54	5.63
2016-17	164726.83	2577675.37	6.39

Source: Agricultural Statistics at a glance 2018, Ministry of Agriculture & Farmers Welfare

From 1990-91 to 2016-17, Table 4 displays the proportion of farm imports in overall imports. Agriculture imports accounted for 2.79 percent of overall imports in 1990-1991. In 1999-2000, it grew to 7.45%. Agriculture imports fell somewhat in three consecutive years: 1993-94, 1995-96, 1996-97, and 1999-2000. Agriculture imports made up 5.29 percent of total imports in 2000-01, the highest level in the decade. In 2016-17, it rose to 6.39%. Agriculture imports increased over the previous year only in the years 2001-02, 2003-04, 2006-07, 2009-10, 2012-13, 2014-15, 2015-16, and 2016-17, while they declined in the other years. In 1998-99, the greatest percentage was 8.17 percent, while in 2008-09, the lowest percentage was 2.09 percent.

Table 5: Growth of Agricultural Exports and Imports

Year	Agricultural Exports	Annual Growth Rate (%)	Agricultural Imports	Annual Growth Rate (%)
1990-91	6012.76	-	1205.86	-
1991-92	7838.04	30.36	1478.27	22.59
1992-93	9040.30	15.34	2876.25	94.57
1993-94	12586.55	39.23	2327.33	-19.08
1994-95	13222.76	5.05	5937.21	155.11

1995-96	20397.74	54.26	5890.10	-0.79
1996-97	24161.29	18.45	6612.60	12.27
1997-98	24832.45	2.78	8784.19	32.84
1998-99	25510.64	2.73	14566.48	65.83
1999-00	25313.66	-0.77	16066.73	10.30
2000-01	28657.37	13.21	12086.23	-24.77
2001-02	29728.61	3.74	16256.61	34.50
2002-03	34653.94	16.57	17608.83	8.32
2003-04	36415.48	5.08	21972.68	24.78
2004-05	41602.65	14.24	22811.84	3.82
2005-06	45710.97	9.88	15977.75	-29.96
2006-07	57767.87	26.38	23000.28	43.95
2007-08	74673.48	29.26	22549.81	-1.96
2008-09	81064.52	8.56	28719.24	27.36
2009-10	84443.95	4.17	54365.29	89.30
2010-11	113046.58	33.87	51073.97	-6.05
2011-12	182801.00	61.70	70164.51	37.38
2012-13	227192.61	24.28	95718.89	36.42
2013-14	262778.54	15.66	85727.30	-10.44
2014-15	239681.04	-8.79	121319.02	41.52
2015-16	215396.32	-10.13	140289.22	15.64
2016-17	226651.91	5.23	164726.83	17.42

Source: Author's own calculation based on Agricultural Statistics at a glance 2018, Ministry of Agriculture & Farmers Welfare

Table 5 illustrates the increase in agricultural exports in India from 1990-91 to 2016-17. In 1990-91, agricultural exports totaled Rs. 6,012.76 crore. It continued to rise, reaching Rs. 25510.64 crore in 1998-99. In 1999-2000, agricultural exports fell somewhat due to a negative annual growth rate of - 0.77%. Agricultural exports in the second decade totaled Rs. 28,657.37 crore in 2000-01. Except for the years 2014-15 and 2015-16, it has risen steadily year after year. Agriculture exports fell by 8% to Rs. 239681.04 crore in 2014-15 and -10.13 percent to Rs. 215396.32 crore in 2015-16, registering negative growth rates of -8.79 percent and -10.13 percent, respectively. In the fiscal year 2016-17, agricultural exports were Rs. 226651.91 crore, representing a 5.23 percent increase (Figure 1).

The table also illustrates the increase in agricultural imports in India from 1990-91 to 2016-17. In 1990-91, agricultural imports totaled Rs. 1,205.86 crores. It climbed steadily, with the exception of a little decline in 1993-94 and 1995-96, and peaked at Rs.16,066.73 crores in 1999-2000. Agriculture imports in India grew at a negative rate of -19.08 percent and -0.79 percent in 1993-94 and 1995-96, respectively. Agricultural imports climbed by more than twice in 1994-95 compared to the previous year, with a 155.11 percent growth rate. Agricultural imports in the second decade totaled Rs. 12,086.23 crores in 2000-01. It continued to rise, reaching Rs. 164726.83 crores in 2016-17. In the years 2005-06, 2007-08, 2010-11, and 2013-14, agricultural imports decreased somewhat, with negative growth rates of -29.96 percent, -1.96 percent, -6.05 percent, and -10.44 percent, respectively.

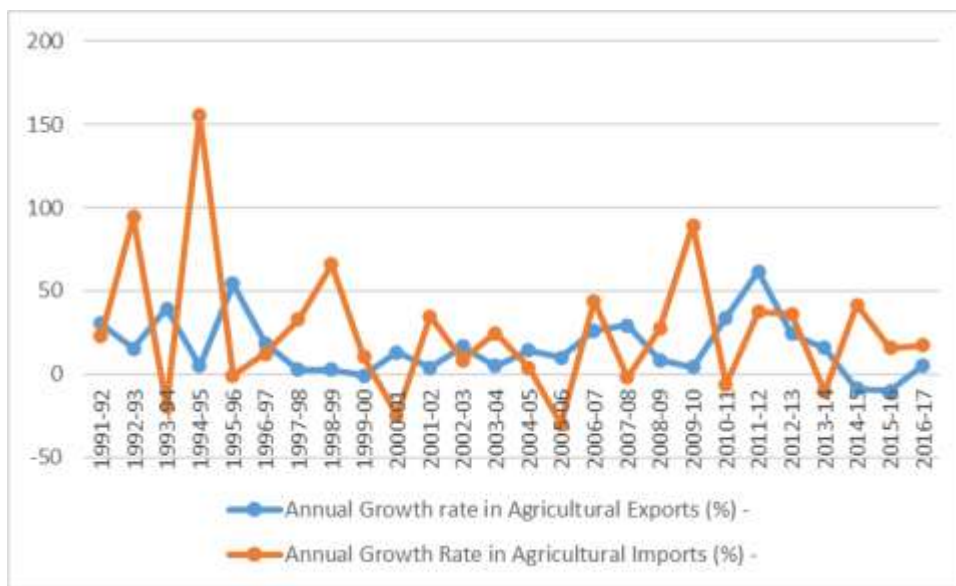


Figure 1: Agricultural Exports and Imports Trend: 1990-91 to 2016-17 (Annual Percentage Change)

Except for the years 1999-2000, 2002-03, 2004-05, and 2015-16, India's agricultural import growth rate exhibited an upward trend as an annual percentage change. India's agricultural imports grew at the fastest rate of 155.11 percent in 1994-95. India's agricultural imports grew at a negative rate in the years 1993-94, 1995-96, 2000-01, 2005-06, 2007-08, 2010-11, and 2013-14. Except for the years

1993-94, 1995-96, 2000-01, 2002-03, 2004-05, 2006-08, and 2010-12, India's agricultural export growth rate has generally been declining. In 2014-15 and 2015-16, India's agricultural exports grew at a negative pace.

V Conclusion

Agricultural trade is a country's economic growth engine. Exporting agricultural commodities has enabled farmers to tap into a larger worldwide market, which has boosted domestic production. During the study period, India's export performance improved dramatically. Despite the fact that the volume and value of exports have expanded dramatically, India's share of global exports continues to fall short of expectations. Agricultural exports have climbed in value, but their share of India's total exports has fallen, according to the report, which spans the

years 2012-13 to 2016-17. Higher exports of rice basmati, spices, rice (non-basmati), raw cotton, sugar, and other agricultural products have boosted the value of agricultural exports. India's agricultural imports have climbed by over 72 percent, and the share of agricultural imports in total imports has also increased from 2012-13 to 2016-17. Goods of vegetable oils, pulses, fresh fruits, cashew nuts, spices, sugar, and other agricultural imports have increased in value throughout this time. Agriculture exports as a percentage of total exports have decreased from 18.49 percent in 1990-91 to 12.26 percent in 2016-17. In 1996-97, the highest share was 20.33 percent, while the lowest was 9.64 percent in 2008-09 (due to global economic slowdown). Agriculture imports were for 6.39 percent of total imports in 2016-17, up from 2.79 percent in 1990-91. The greatest percentage was 8.17 percent in 1998-99, while the lowest percentage was 2.09 percent in 2008-09 (due to global economic slowdown). Except for the years 1999-2000, 2002-03, 2004-05, and 2015-16, India's agricultural import growth rate has been steadily increasing. India's agricultural imports grew at the fastest rate of 155.11 percent in 1994-95. India's agricultural imports grew at a negative rate in the years 1993-94, 1995-96, 2000-01, 2005-06, 2007-08, 2010-11, and 2013-14. Except for the years 1993-94, 1995-96, 2000-01, 2002-03, 2004-05, 2006-08, and 2010-12, India's agricultural export growth rate has been declining. In 2014-15 and 2015-16, India's agricultural exports grew at a negative pace. This indicates a gradual increase in agriculture imports as a percentage of total imports, while agriculture exports have gradually dropped as a percentage of total exports in India. The drop in farm exports was mostly due to poor commodity prices and global market overstock. As a result, the government's trade policy should focus on sufficiently motivating farmers to invest more in productivity-increasing practices, which will not only help the agriculture sector realize its full potential but also help meet domestic demand. Policy should be structured in such a way that we may cut our massive import bills for vegetable edible oils and pulses.

References

Burange, L. G., & Chaddha, S. J. (2008). INDIA'S REVEALED COMPARATIVE ADVANTAGE IN MERCHANDISE TRADE. Working Paper No. UDE28/6/2008, Department of Economics, University of Mumbai.

Chand, R. (1999). Liberalization of agricultural trade and net social welfare: A study of selected crops.

Economic and Political Weekly, 34(52), A153-A159.

GOI, State of Indian Agriculture 2017, Ministry of Agriculture and Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics and Statistics, New Delhi.

GOI, Annual Report 2017-18, Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture and Farmers Welfare, Krishi Bhawan, New Delhi.

Rajkumar, & Dadhich, V. (2013). Growth and Performance of India's Agriculture Export.

International Journal of 360 Management Review, 1(1), 1-13.

Ramphul (2006). WTO and India's Agricultural Trade. *The Indian Journal of Commerce*, 59 (4), 62- 72.

RBI, Handbook of Statistics on Indian Economy (various years).

Sahni, P. (2014). Trends In India's Exports: A Comparative Study of Pre and Post Reform Period. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 3 (2), 08-18.

WTO, International trade Statistics (Various Issues), WTO Publications, Geneva.